

ATTY REF: P50-0071

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Robert Vanstory TEEPLE et al. ) Examiner: Justin FISCHER  
Application No.: 09/995,340 ) Group Art Unit: 1733  
Filing Date: November 27, 2001 )  
Title: Tire with multiple carcass reinforcement )  
plies having beads of specified structure )

**SUPPLEMENTAL DECLARATION UNDER 37 CFR § 1.131**

Robert Vanstory Teeple, declares that the following statements made of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-captioned application and any patent that issue thereon:

1. I am an inventor of the subject matter which is claimed in the above-captioned United States patent application.
2. Prior to 31 August 2001, I and the other named inventors conceived and reduced the claimed invention to practice, preparing a record of the invention for my employer describing the subject matter which is claimed in the application. A copy of the relevant page of the written record is attached to this Declaration. The date of the invention record is prior to 31 August 2001.
3. The invention of our application is an improvement on earlier inventions owned by my employer, in particular, the inventions described in US Patent No. 5,971,047 to Drieux et al., and US Patent No. 5,634,993 to Drieux et al. These patents are described in the background section of our application. In particular, the '047 patent describes a basic construction of a tire bead having a single radial reinforcing ply (column 1, lines 55-56), a bead wire coated with rubber (column 1, lines 59-60), a bead filler disposed radially and axially outside the bead wire (column 3, lines 9-17), and a rubber wedge or profile axially adjacent the bead wire and being defined by upper (radially outer) and lower (radially inner) surfaces at angles relative to the axis of rotation of the tire of, respectively, 20 to 70 degrees

and 0 to 30 degrees (column 2, lines 42-45). The wedge is described as having a Shore Hardness of greater than 65 (column 2, lines 46-49). Further, different bead wire constructions are described at column 2, lines 58-66 and column 3, lines 4-8.

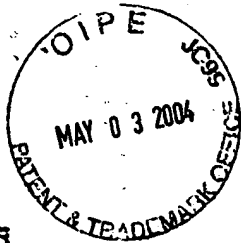
4. Our invention relates to the novel arrangement of two reinforcing plies in such a tire bead for a high load tire. It includes The attached page includes drawings of different embodiments of the invention which we conceived and reduced to practice prior to 31 August 2001. In particular, the drawing labeled "Classic" corresponds to Figure 1 in the application, which is the elected invention in this application. The "Classic" drawing shows, as recited in claim 1 of our application, a bead wire (indicated by a dark circle), two reinforcement plies (the lines suggesting a tire shoulder, sidewall, and bead), and a wedge, which is the area surrounded by one of the plies. Note that in the drawing, a first radial reinforcement ply is wound on the bead wire to form a first upturn, the reinforcement ply being wound about said bead wire passing from the heel toward the toe of said at least one bead, and the first upturn engaging the radially outer side the wedge. A second radial reinforcement ply is wound on the bead wire, the second reinforcement ply being disposed in parallel to the first radial reinforcement ply in a sidewall area of the tire and being wound about said bead wire passing from the heel toward the toe of said at least one bead with a second upturn engaging the radial inner side of the wedge.

5. In addition, the drawing labeled "whiskers" corresponds to Figure 4 in this application. The "whiskers" drawing shows a bead wire as a dark circle, a wedge, indicated as a gray triangle, and two reinforcing plies wound on the bead wire, with the upturn of one ply contacting the radially outer side of the wedge, and the upturn of the other ply contacting the radially inner side of the wedge.

Respectfully submitted,

  
Robert Vanstory Teeple

Date: *Apr 23, 04*



# Tire Constructions Evaluated, and Overall Results

	Classic	TPF1	TPF2	Interrupt Whiskers	Shoulder Lock	
255-740R480A (SH = 135)						
255-810R520A (SH = 145)						